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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/594,780 | 09/29/2006 | Yuri Gulevich | FE 6168 (US) | 7141 |
| 34872 | 7590 | 11/04/2009 | | |
| Basell USA Inc. Delaware Corporate Center II 2 Righter Parkway, Suite #300 Wilmington, DE 19803 | | | EXAMINER QIAN, YUN | |
| | | | ART UNIT 1793 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/594,780 | Applicant(s) GULEVICH ET AL. | |
| | Examiner YUN QIAN | Art Unit 1793 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 18 and 19-23 remain for examination. Claims 18, 20, 22, 24, 27-28, 34 and 36 are amended. Claim 19 is canceled. Claims 24-36 are previously withdrawn from consideration.

Election/Restrictions

Applicants' arguments are not found persuasive because the office action mailed on March 11, 2009 did point out the special technical feature linking the inventions, such as $\text{MgCl}_n(\text{OR})_{2-n}\cdot\text{LB}$ taught by Scata et al. (US 4,220,554), does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

The requirement is still deemed proper and is therefore is made FINAL.

Grounds of Rejection

The ground(s) of rejection, below, is made as follows with respect to the currently amended claims 18, 20 and 22, and these directly or indirectly dependant claims. It is substantially the same as generally set in the office action mailed on March 11, 2009.

Modified Grounds of Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

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matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18 and 22-23 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Scata et al. (US 4,220,554).

Regarding claims 18, and 22-23, Scata et al. discloses a method of preparing catalyst component for polymerizing alpha-olefins by reaction between (a) a Ti containing compound, (b) alkoxy magnesium halide with the structure as shown below (abstract):



in which $0 \leq n \leq 2$, R is an alkyl, aryl, cycloalkyl radical containing from 1 to 20 carbon atoms, X is halogen or a group OR' in which R' is an alkyl, aryl or cycloalkyl radical containing from 1 to 20 carbon atoms and is the same or different from R in formula (I).

and (c) an electron-donor compound (applicant's Lewis base such as ethers) (col.2, line 65). The molar ratio of a hydrocarbyl electron-donor compound relative to the Mg dihalide, corresponding to the p value as in the instant claims 18 and 22, is from 0.1 to 0.5 (abstract, and claim 9), the n value is $0 \leq n \leq 2$, R is C₁-C₂₀ (abstract, and claim 1).

The references differ from Applicant's recitations of claims by not disclosing identical ranges ($0.1 \leq n \leq 1.9$, $0.4 \leq p \leq 3$, R is C₁-C₂₀). However, the reference discloses "overlapping" ranges, and overlapping ranges have been held to establish prima facie obviousness (MPEP 2144.05).

Claims 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Scata et al. (US 4,220,554) as applied to claim 18 above, and further in view of Zakharov et al. (WO 96/32426).

Regarding claims 20-21 as discussed above, although Scata et al. teaches using ether as the electron-donor compound, he does not specifically disclose using cyclic ether comprising 3-5 carbon atoms such as THF as per applicant claim 20-21.

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Zakharov et al. teaches a method for the preparation of an alkoxymagnesium halide/Ti compound catalyst system suitable for the polymerization of olefins in the presence of an inert solvent, i.e., dialkyl ether or THF (page 3, lines 19-27, and claim 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Scata and Zakharov to obtain the invention as specified in the claim 20-21, motivated by the fact that the resulting catalyst is very active for the polymerization, and eliminates additional activation catalyst steps (page 2, lines 8-10).

Since Scata and Zakharov both teach a catalyst system suitable for the polymerization of olefins comprising an alkoxymagnesium halide, Ti compound and electron donor, it would have a reasonable expectation of success. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

With regards to the previous Grounds of Rejection

Applicant's arguments with respect to claims 18-23 have been considered but they are not persuasive. The examiner would like to take this opportunity to address the Applicant's arguments.

Regarding claims 18-19 and 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Scata et al. (US 4,220,554), applicants argue the recited claims comprising a higher Mg/LB ratio than those disclosed in Scata et al (Remarks, pages 5 and 6-7).

The Examiner respectfully submits that the molar ratio of a hydrocarbyl electron-donor compound relative to the Mg dihalide, corresponding to the p value as in the instant claims 18 and 22, is from 0.1 to 0.5 as disclosed by Scata et al. in claim 9. It overlaps the recited claims. The references differ from Applicant's recitations of claims by not disclosing identical ranges ($0.4 \leq p \leq 3$). However, the reference discloses "overlapping" ranges, and overlapping ranges have been held to establish prima facie obviousness (MPEP 2144.05).

In addition, applicants argue that the Examiner has not explained *why*, absent Applicant's specification, one of ordinary skill in the art would have modified the disclosure of Scata, et al. to remove the aromatic electron-donor compounds therein for Applicant's currently and specifically claimed aliphatic, aprotic Lewis bases (Remarks, pages 5-6).

The arguments are not found persuasive. As discussed in the office action mailed on March 11, 2009, Scata et al. teaches the use of an electron-donor compound ethers (applicant's Lewis base) (Office action, page 5). Ethers taught by Scata et al. encompass the recited claims.

Therefore, the rejection stands.

Regarding claims 20-21, the rejection under 35 U.S.C. 103(a) as being unpatentable over Scata et al. (US 4,220,554) and further in view of Zakharov et al., applicants argue that the Examiner fails to establish a *prima facie* case of obviousness.

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And Zakharov et al. does not teach all the features of the present claimed invention (Remarks, pages 8-10).

The arguments are not found persuasive. As discussed in the office action mailed on March 11, 2009, Scata et al. teaches the catalyst system containing electron donor ether, except he does not specifically disclose the use of THF as per applicant claim 21.

Zakharov et al. teaches a method for the preparation of an alkoxymagnesium halide/Ti compound catalyst system suitable for the polymerization of olefins in the presence of an inert solvent, i.e., dialkyl ether or THF (page 3, lines 19-27, and claim 1).

The motivation of combining the teaching of Scata et al. and Zakharov et al. is by the fact that the resulting catalyst is very active for the polymerization, and eliminates additional activation catalyst steps (page 2, lines 8-10).

Furthermore, since Scata and Zakharov both teach a catalyst system suitable for the polymerization of olefins comprising an alkoxymagnesium halide, Ti compound and electron donor, it would have a reasonable expectation of success. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

Applicant's arguments against the reference of Zakharov et al. are not found persuasive.

Because, note that while Zakharov et al. do not disclose all the features of the present claimed invention, Zakharov et al. is used as a secondary reference, and

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therefore, it is not necessary for this reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the use of THF as an electron donor, and in combination with the reference of Scata et al., discloses the presently claimed invention as set forth in the office action mailed on March 11, 2009. Therefor, the rejection stands.

Therefore, the rejection stands.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/YUN QIAN/
Examiner, Art Unit 1793